

A NEW SPECIES OF *CALOMELA* HOPE (COLEOPTERA: CHRYSOMELIDAE) FROM NEW SOUTH WALES, WITH HABITAT AND DISTRIBUTION NOTES ON OTHER SPECIES IN THE GENUS

C.A.M. REID

Department of Zoology, Australian National University, G.P.O. Box 4, Canberra, A.C.T., 2601

Abstract

Calomela relict sp. n. is described from two localities in New South Wales. New distribution and host plant records are given for ten other species of the genus.

Introduction

The genus *Calomela* Hope was revised recently by Selman (1979), who included 23 species. In the course of a study of the larvae of this genus a species was collected which differed from all those known. Further material was found in the Australian National Insect Collection, Canberra (ANIC). As I intend to include its larval description in a review of larval characters of *Calomela* the new species is described here. New host plants and localities are reported for other *Calomela* species.

***Calomela relict* sp. n.**

Types: NEW SOUTH WALES: Holotype male, Dilgry Riv. loop, Barrington Tops State Forest, on *Acacia barringtonensis* and *A. melanoxyton*, 25.xi.1986, C. Reid (ANIC); paratypes (all ANIC): 7 males, 5 females, same data as holotype; 11 males, same data as holotype except 26.xi.1985; 3 males, 1 female, same data as holotype except no host given and 15-16.xi.1981, T. Weir; 1 male, 5 km S Monga, on *A. falciformis*, 14.iii.1987, C. Reid; 1 female, 10 km S Monga, on *A. rubida*, 4.iv.1987, C. Reid.

General appearance (Fig. 1). Head, thorax, abdomen, legs and antennal segments 1-4 red; apical antennal segments black. Elytra reddish-brown with strong dark green or purple sheen; elytra parallel-sided. Prothorax with convex lateral margins. Size 6-7.5 mm.

Morphology. Head: punctation finer and closer than pronotum. Antennae subincrassate, segments 6-11 expanded. Apical segment of maxillary palp securiform. Eyes entire. Pronotum: twice as broad as long; sides irregularly margined, curved but with prominent hind angles; punctation coarse but diffuse becoming denser at sides. Venter of prothorax (Fig. 2): 'notopleural suture' weakly developed as shallow irregular groove; prosternal process raised and expanded at bilobed tip. Scutellum triangular. Elytra: basal 2/3 parallel-sided; irregularly striate, stria punctures fine, diameter much less than interspaces; humeri prominent, without lateral depressions behind. Claws bifid (Fig. 3).

Male. Apical sternite (Fig. 4): broad excavation at apex with prominent teeth; central disc shallowly impressed, with dense, fine

pubescence. Aedeagus (Fig. 5) elongate and acutely pointed, without external flagellum.

Female. Apical sternite (Fig. 6): narrow excavation at apex without lateral teeth; central disc simple. Spermatheca (Fig. 7) U-shaped, broadest at apex, transversely reticulate.

Comments

Although the 'notopleural sutures' are weakly developed this species clearly belongs in *Calomela* as currently conceived. Superficially it resembles *C. ruficeps* (Boisduval) and *C. pulchella* (Baly) but these species have rounded not parallel-sided elytra, with lateral depressions. Selman's 1979 key to the species may be modified to include *C. relictata* as follows:

- 6(5). Elytra entirely metallic green or purple and much more finely punctured (intervals wider than punctures) *relictata* sp. n.
 Elytra with a narrow green stripe 2-4 intervals wide, on flavous background and much more coarsely punctured (intervals equal to or less than width of punctures) 6a (= 6)

Distribution and biology

Known from two isolated localities in New South Wales, Barrington Tops and Monga, where it occurs in temperate rainforest and wet sclerophyll forest. *Calomela relictata* feeds on a range of *Acacia* species: *barringtonensis* Tindale, *falciformis* DC., *melanoxyton* R.Br. and *rubida* A. Cunn.

New host plants and localities for *Calomela* species

New host plants (adults, and usually larvae, recorded feeding) with approximate localities and some range extensions (compared with the maps given by Selman (1979)) are listed. Plants were identified from the regional floras by Costermans (1981), Beadle, Evans and Carolin (1982), Blackall and Griere (1985), Stanley and Ross (1983) and by staff of the Australian National Botanic Gardens (*A. barringtonensis*). All records are my own unless otherwise noted.

Calomela crassicornis (Fabricius)

A. complanata A. Cunn. ex Benth. (Brisbane, Qld).

Calomela curtisi (Kirby)

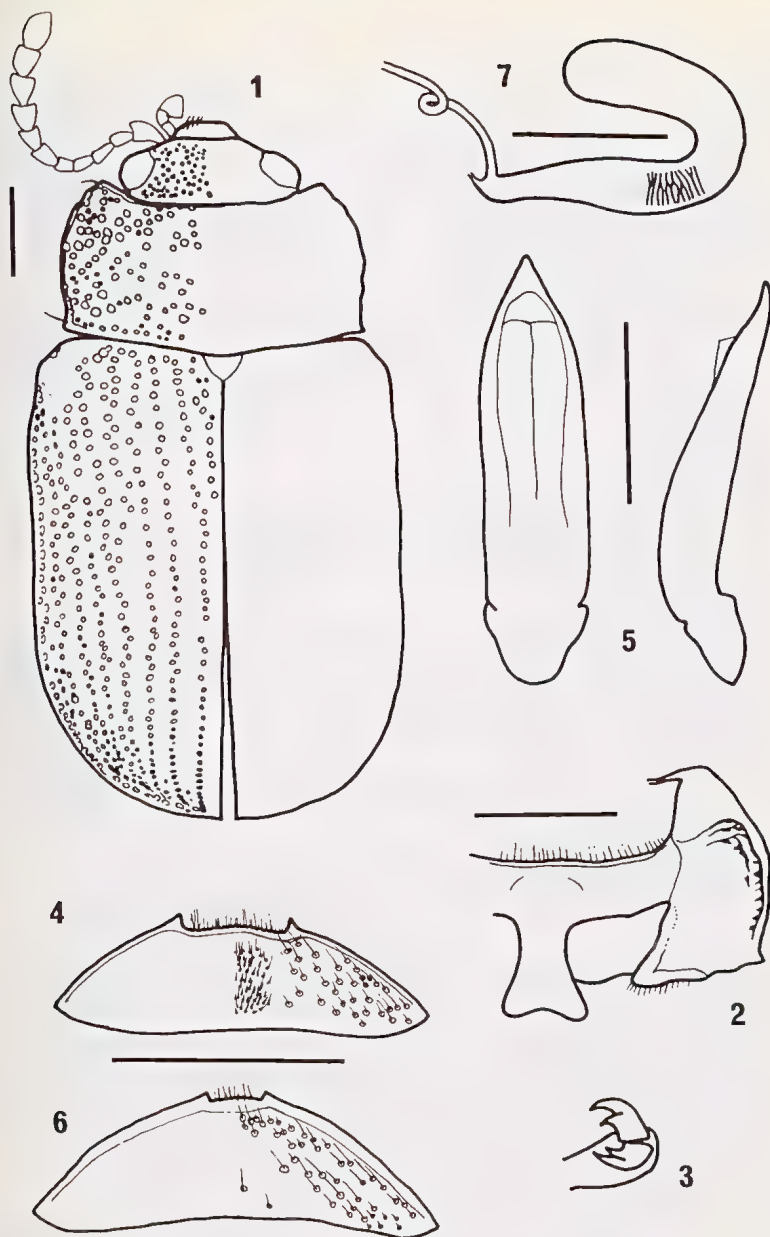
A. mearnsii De Wild (Bemboka, NSW); *A. microbotrya* Benth. (Williams, WA, coll. G. Tribe); *A. rubida* (Queanbeyan, NSW).

Calomela eyrei Blackburn

A. victoriae Benth. (Kinchega National Park, NSW). Nearest known locality Port Pirie, SA.

Calomela fugitiva Lea

A. barringtonensis and *A. melanoxyton* (Barrington Tops State Forest, NSW). Previously known only from Cathedral Rocks National Park (NSW) and Wide Bay (Qld).



Figs 1-7. *Calomela relictata* sp. n.: (1) dorsum; (2) venter of prothorax; (3) claws; (4) apical sternite of male; (5) aedeagus, dorsal and lateral views; (6) apical sternite of female; (7) spermatheca. Scale bars (1, 2), (4-6) = 1.0 mm; (7) = 0.25 mm; (3) not to scale.

Calomela ioptera (Baly)

A. binervata DC. (Barrengarry, NSW); *A. falciformis* (Monga, NSW); *A. mabellae* Maiden (Kioloa, NSW); *A. melanoxylon* (Brisbane, Qld); *A. obliquinervia* Tindale (Mt Ginini, ACT; Kosciusko National Park, NSW); *A. obtusata* Sieber ex DC. (25 km NE Rylstone, NSW); *A. suaveolens* (Smith) Willd. (Kioloa, NSW); *A. uncinata* Lindl. (Warrumbungle National Park, NSW).

Calomela juncta Lea

A. barringtonensis (Barrington Tops State Forest, NSW); *A. decurrens* (Wendl.) Willd. (Canberra, ACT; Nerriga and Bywong Mtn, NSW); *A. irrorata* Sieber ex Sprengel (Liston, NSW); *A. mearnsii* (Bemboka, Braidwood and Kioloa, NSW); *A. parramattensis* Tindale (Bilpin and Berambing, NSW); *A. trachyphloia* Tindale (Clyde Mtn, NSW); *A. uncinata* (Warrumbungle National Park, NSW).

Calomela pulchella (Baly)

A. irrorata (Liston, NSW); *A. mearnsii* given by van den Berg (1982) without locality, is also a new host record.

Calomela ruficeps (Boisduval)

A. barringtonensis (Barrington Tops State Forest, NSW); *A. longifolia* (Andr.) Willd. (Port Macquarie, NSW, coll. K. Pullen); *A. melanoxylon* (Brisbane, Qld); *A. suaveolens* (Kioloa, NSW). The distribution of this species is probably continuous in the coastal forests and ranges from southern NSW to southern Qld.

Calomela satelles Blackburn

A. ligulata A. Cunn. ex Benth. (Kalgoorlie and 60 km W Coolgardie, WA).

Calomela vittata (Baly)

A. dealbata Link and *A. mearnsii* (Brindabella Range, ACT).

Discussion

Despite the diversity of hosts listed by Selman, most *Calomela* species are probably confined to *Acacia*. Within *Acacia* most species of *Calomela* show catholic taste, being found on species which are bipinnate or phyllodinous, and spike or globular flower-headed. The genus *Calomela* is widespread in Australia and throughout its range appears to be a common element in the phytophagy of *Acacia*.

Acknowledgements

I thank Geoff Tribe and Kim Pullen for allowing me to use their data and the staff of the Australian National Botanic Gardens for identifying *Acacia barringtonensis*. Material collected in Kinchega, Kosciusko and Warrumbungle National Parks was taken under NSW NPWS Licence no. B356.

REFERENCES

BEADLE, N.C.W., EVANS, O.D. and CAROLIN, R.C. 1982. *Flora of the Sydney Region*. 722 pp. A.W. Reed and Co., Sydney.

- BLACKALL, W.E. and GRIERE, B.J. 1985. *How to know Western Australian wild flowers*. Parts i and ii. cxxxv + 406 pp. University of Western Australia Press, Perth.
- COSTERMANS, L. 1981. *Native trees and shrubs of south-east Australia*. 422 pp. Rigby, Adelaide.
- SELMAN, B.J. 1979. A reappraisal of the Australian species of the genus *Calomela* Hope (Coleoptera: Chrysomelidae). *Australian Journal of Zoology* 27: 561-584.
- STANLEY, T.D. and ROSS, E.M. 1983. *Flora of south-east Queensland*. Vol. 1. iv + 545 pp. Queensland Department of Primary Industries Misc. Publication 81020.
- Van den BERG, M.A. 1982. Coleoptera attacking *Acacia dealbata* Link., *Acacia decurrens* Willd., *Acacia longifolia* (Andr.) Willd., *Acacia mearnsii* De Wild. and *Acacia melanoxylon* R. Br. in Australia. *Phytophylactica* 14: 51-55.

AN ACCUMULATIVE BIBLIOGRAPHY OF AUSTRALIAN ENTOMOLOGY

Compiled by G. Daniels

BALINT, Z.

- (1986). Butterflies from Australia (Lepidoptera: Rhopalocera). *Folia ent. hung.* 47: 19-22.

BALLANTYNE, L.A.

- (1988). The identities of *Luciola australis* (F.) and *L. guerini* Laporte (Coleoptera: Lampyridae). *J. Aust. ent. Soc.* 27: 161-165.

BARKER, S.

- (1988). Contributions to the taxonomy of *Stigmodera* (*Castiarina*) (Coleoptera: Buprestidae). *Trans. R. Soc. S. Austr.* 112: 133-142.

BARTELL, R.J., BELLAS, T.E. and WHITTLE, C.P.

- (1988). Evidence for biological activity of female *Cydia pomonella* (L.) (Lepidoptera: Tortricidae). *J. Aust. ent. Soc.* 27: 11-12.

BASSET, Y.

- (1988). A composite interception trap for sampling arthropods in tree canopies. *J. Aust. ent. Soc.* 27: 213-21.

BELLAMY, C.L.

- (1988). The classification and phylogeny of the Australian Corobeini, Bedel, with a revision of the genera *Paracephala*, *Meliboeithon* and *Dinocephalia* (Coleoptera: Buprestidae: Agrilinae). *Invert. Taxon.* 2: 413-453.

BENSON, L.J. and PEARSON, R.G.

- (1988). Diversity and seasonality of adult Trichoptera captured in a light trap at Yuccabine Creek, a tropical Australian rainforest stream. *Aust. J. Ecol.* 13: 337-344.

BISTRÖM, O.

- (1988). Generic review of the Bidessini (Coleoptera, Dytiscidae). *Acta zool. fenn.* 184: 1-41.

BOCK, I.R.

- (1984). A new species of the *inornata* group, genus *Drosophila* Fallén (Diptera: Drosophilidae). *J. Aust. ent. Soc.* 23: 141-143.
- (1989a). The Australian species of *Paralimna* and *Notiphila* (Diptera: Ephydriidae). *Invert. Taxon.* 2 (1988): 885-902.
- (1989b). New genera and species of Australian Drosophilidae (Diptera). *J. Aust. ent. Soc.* 28: 169-179.